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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,290	03/26/2004	Tetsuro Takizawa	17586	2185
23389	7590	07/13/2007	EXAMINER	
SCULLY SCOTT MURPHY & PRESSER, PC			PEIKARI, BEHZAD	
400 GARDEN CITY PLAZA			ART UNIT	PAPER NUMBER
SUITE 300			2189	
GARDEN CITY, NY 11530				

  

MAIL DATE	DELIVERY MODE
07/13/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/811,290	TAKIZAWA, TETSURO
	Examiner	Art Unit
	B. James Peikari	2189

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 24 April 2007.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,11,12 and 17 is/are rejected.
- 7) Claim(s) 2-10,13-16 and 18-20 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 24 April 2007 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The previous objection to the drawings is withdrawn due to the amendment filed on April 24, 2007.

### ***Specification***

2. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.
  - (A) A new abstract is not necessary. The abstract filed on April 24, 2007 is acceptable.
  - (B) Although many errors in idiomatic English have been corrected in the specification, numerous errors still exist. The examples of errors listed in the previous Office action were not meant to be comprehensive. For example, a comprehensive correction of page 2 follows. The remainder of the specification should be revised accordingly:

"the bank can be accessed speedily when compared with a bank that has been closed. However, when accessing a page that is different from a page whose bank has been opened, the bank will be accessed at a slower speed when compared to the closed bank, because the accessed page must be opened after the bank has been pre-charged.

Finding data on a given page is called a "hit" and failure to find data on a given page is called a "miss".

A memory control device using a conventional open page policy, wherein access efficiency is improved by changing the time at which a bank is closed according to a number of hits to the bank, is disclosed in Japanese Patent Application Publication No. 2001-166985.

Both the closed page policy and the open page policy have drawbacks. The closed page policy heightens access performance when the probability of a hit is low, while the open page policy heightens access performance when the probability of a hit is high. However, neither policy will enable a system to reach its theoretical limit for access performance.

Further, in a memory control device employing an open page policy, wherein the time at which a bank is closed according to a number of hits to the bank, if misses are found continuously in a short interval, the access efficiency of the device will not improve because the bank is always kept open after each access attempt.

Moreover, the conventional memory control device has another drawback. That is, when the shortest time with which a bank is

### ***Claim Objections***

3. The previous objections to the claims are withdrawn due to the amendment filed on April 24, 2007.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. The previous rejections under 35 U.S.C. 112, second paragraph, are withdrawn due to the amendment filed on April 24, 2007.

6. Claims 12 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 12, line 1, "The memory access control unit" has no antecedent basis.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Farrell, U.S. 5,665,153.

Farrell teaches the invention of claims 1-10 with a page open/close scheme that is based, in part, on a likelihood of page access (i.e., a hit prediction). Note especially Figure 5.

As for the claimed memory master, note host 150. As for the memory control unit, note memory controller 128. As for the hit prediction, note step 514.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Farrell, U.S. 5,665,153.

As for claim 11, Farrell does not explicitly mention that the system described above in the rejection of claim 1 may be used in a multiprocessor environment, with the requisite arbitration circuitry of such an environment. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the Farrell system in a multiprocessor environment, since multiple processors generally mean faster results.

***Allowable Subject Matter***

11. Claims 2-10 and 13-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. Claims 12 and 17 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Because of the particular relevance of these references to the present claims, applicant is strongly encouraged to consider each reference prior to formulating any response to this Office action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Peikari whose telephone number is (571) 272-4185. The examiner is generally available between 7:00 am and 7:30 pm, EST, Monday through Wednesday, and between 5:30 am and 4:00 pm on Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Reginald Bragdon, can be reached at (571) 272-4204. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center at 866-217-9197 (toll-free).



B. James Peikari  
Primary Examiner  
Art Unit 2189  
7/7/07